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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,195	03/02/2004	Kyle K. Kirby	2269-5865US (03-0257.00/U)	1984
24247	7590	08/23/2006	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			NGUYEN, HUNG THANH	
			ART UNIT	PAPER NUMBER
			2841	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/791,195

Applicant(s)

KIRBY ET AL.

Examiner

HUNG T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-99 is/are pending in the application.
- 4a) Of the above claim(s) 21-42 and 59-99 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 43-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/25/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-20, 43-47, 49-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Akram et al. (US 5,686,317)

**Regarding claim 1, 18, 56:** Akram et al. discloses in figures 1E-6A, a contact pin assembly, comprising: a substantially planar substrate (12), a first contact pin (26) having a contact end (34) on a first side of the substrate (upper portion of element 12) and formed in a place (it appears element 26 is formed in place with element 12) from a first portion of the substrate (12); and first compliant coupling structure (38, see figure 1G) to couple the first contact pin (26) in an orthogonally compliant orientation with the substantially planar substrate (12).

**Regard claim 2, 19, 57:** Akram et al. disclose in figures 1E-6A, the first contact pin (explain in claim 1) further comprises conductive material (see column 9, lines 27-39) around at least a portion of the first contact pin (explain in claim1).

**Regard claim 3, 20, 58:** Akram et al. discloses in figures 1E-6A, the first compliant coupling structure (explain in claim 1) is an electrically conductive compliant coupling structure (see column 9, lines 27-39) for electrically coupling

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the conductive material of the first contact pin (explain in claim 1) with the substrate (explain above).

**Regard claim 4, 44-46:** Akram et al. discloses in figures 1E-6A, the conductive material (explain above) around the at least a portion of the first contact pin (explain in claim 1) comprises conductive plating for electrically coupling with the first compliant coupling structure (conductive material around contact pin and also plating for electrically coupling with first compliant, see figures).

**Regard claim 5, 47:** Akram et al. discloses in figure 3, a wire bond (76) extending from the conductive material (explain above) of the first contact pin (explain in claim 1) to the substrate (explain above).

**Regard claim 7, 10, 49, 52:** Akram et al. discloses in figures 1G-1J, the first contact pin (explain in claim1) further comprises a first conductor (38) formed therein from the contact end to an interconnect end of the first contact pin (explain in claim 1).

**Regarding claim 8, 50:** Akram et al. discloses in figure 1E-1E-4, a conductive block (22) coupled to one of the contact end and the interconnect end of the first conductor.

**Regard claim 9, 16, 51:** Akram et al. discloses in figure 1E, the conductive block (explain above) is generally rigid (element 22 is rigid).

**Regard claim 11, 12, 53, 54:** Akram et al. discloses in figures 1G-1J, a wire bond (portion of 38) from the interconnect end of the first conductor to the substrate (explain above).

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**Regard claim 13:** Akram et al. discloses in figure 2, the substrate is thinner than a length of the first contact pin (it appears in figure 2, the substrate is thinner than the length of first contact pin).

**Regard claim 14:** Akram et al. discloses the substrate is a semiconductor wafer (see columns 9-10).

**Regard claim 15:** Akram et al. discloses in figures 1G-1J, at least one stop formed (portion of each element 26) on the substrate and configured to establish a maximum range of motion of the first contact pin (explain above).

**Regard claim 17, 55:** Akram et al. discloses a profile configured to facilitate electrical coupling of the first contact pin with a contact pad of a device-under-test (see columns 9-10).

**Regard claim 43:** Akram et al. discloses in figure 1E-6A, a contactor card, comprising: a substrate (12) configured for attachment with a semiconductor tester and at least one contact pin (26) assembly, including: a substantially planar substrate (portion of 12), a first contact pin (12) formed in place from a first portion of the substrate (12); and first compliant coupling structure (38, figure 1G) to couple the first contact pin (26) in an orthogonally compliant orientation with the substrate.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. (US 5,686,317) in view of Eldridge et al. (US 6,778,406).

**Regard claim 6, 48:** Akram et al. discloses all elements of the contact pin assembly as described above with respect to claim 1 except, Akram et al. does not disclose the first compliant coupling structure is an elastomer material.

Eldridge et al. discloses the first compliant coupling structure is an elastomer material (columns 49, lines 35-40).

Akram and Eldridge et al are analogous art because they are from the same field of endeavor to make resilient contact pins.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make compliant structure of Akram et al. to have elastomer as taught by Eldridge et al. for the benefit of providing a conductive path between tip and end.

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### Relevant Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Akram et al. (US 5,686,317) pin formed in place with substrate, Takado (US 5,939,817) teaches contact pin on substrate, Imataki et al. (US 4,876,042) teaches the pin on substrate, Kato et al. (US 5,338,178) teaches the embossing metal hold, Warren (US20050101037) teaches the compliant pin, Thomas teaches the compliant probe conductive tip (US 20040246010), Igor teaches device under test (DUT) (US 20050017750).

### Conclusion

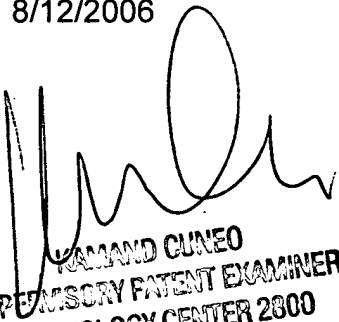
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG T. NGUYEN whose telephone number is 571-272-5983. The examiner can normally be reached on 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMMIE CUNEO can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

HN

Hung Thanh Nguyen

8/12/2006

  
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